

REMARKS

Applicants appreciate the renumbering of claims 56-79 as noted in the Office Action.

Claims 34, 37, 62, and 64-79 have been amended, and claims 35, 36, and 63 have been cancelled without prejudice. No new matter has been added by virtue of the amendments. Independent claims 34 and 62 have been amended to incorporate features of now-cancelled dependent claims. Claims 64-79 have been amended to correct dependencies in view of the claim renumbering.

It is also believed that the amendments may be properly entered at this time, i.e. after final rejection, pursuant to 37 CFR 1.116 because the amendment do raise any new issues or require a new search, and they reduce issues for appeal. In particular, as mentioned above, the independent claims have been amended to incorporate features of prior dependent claims and thus no new search or new issues or raised by those amendments since the claims as now presented have been already fully considered. The correction of the dependencies of claims 64-79 also is a mere formality that does not raise any new issues. The amendments also clearly obviate outstanding rejections as noted below and therefore reduce issues for appeal. Entry of the amendments at this time is earnestly solicited.

Applicants hereby affirm the species election as noted on page 3 of the Office Action.

Claims 34, 35, 37, 38, 41, 43, 46-50, 53-57, 59-62, 64, 65, 68, 70 and 73-77 were rejected under 35 U.S.C. 102 over Sato et al. (U.S. Patent 6,270,948). The rejection is traversed.

Independent claims 34 and 62 (the only pending independent claims) have been amended to incorporate features of dependent claims 36 and 63 respectively, which dependent claims were not rejected over Sato et al.

In view thereof, reconsideration and withdrawal of the rejection are requested.

Claims 62-64 were rejected under 35 U.S.C. 102 over EP 0501178. The rejection is traversed.

Independent claim 62 has been amended to incorporate features of dependent claim 74, which dependent claim was not rejected over EP 0501178. In view thereof, withdrawal of the rejection is requested.

Claim 58 was rejected under 35 U.S.C. 103 over Sato et al. (U.S. Patent 6,270,948) in view of Ding et al. (U.S. Patent 5,981,145). The rejection is traversed.

The addition of Ding et al. does not remedy the deficiencies of Sato et al. as noted above. For instance, among other things, Ding et al. does not disclose or otherwise suggest an underlying antireflective composition that comprises a silsesquioxane resin as recited in Applicants' independent claim 34.

In view thereof, withdrawal of the rejection is requested.

Claims 36, 42 and 69 were rejected under 35 U.S.C. 103 over Sato et al. (U.S. Patent 6,270,948) in view of Clodgo et al. (U.S. Patent 4,981,530). As grounds for the rejection, the following is stated in the Office Action (pages 7-8):

Sato remains silent about antireflective composition, which comprises silsesquioxane resin. However, Sato motivates the skilled artisan to add different ingredients to his silicon containing antireflective coating composition in order to facilitate the use of his composition and improve its properties, for example adhesion (col. 27, lines 52-63).

Silsesquioxane resins is conventionally utilized in semiconductor processing for obtaining thermally stable and crack resistant films with improved adhesion properties, which is recited in Clodgo, col. 2, lines 15-18; col. 5, lines 1-9. Therefore, the skilled artisan, motivated by disclosure of Sato and teaching of US '530, would have found it obvious to introduce the silsesquioxane of Clodgo into the organosilicon antireflective coating in order to improve its adhesion while forming the semiconductor structure of Sato and thus to arrive at the limitations as instantly claimed.

The rejection is traversed.

The skilled worker would have had no incentive to make the combination proposed by the instant rejection.

In particular, the Clodgo et al. document reports a certain **insulation layer**. No suggestion to overcoat that insulation layer with a photoresist, or that any single component of the Clodgo et al. system should or could be successfully incorporated into a composition as reported in Sato et al.

Additionally, contrary to the position advanced in the instant rejection, the cited disclosure of Sato et al. at col. 27, lines 52-63 does not provide the skilled worker any particular incentive to look to materials of Clodgo. Rather, the cited disclosure of Sato et al. is quite specific on possible materials to optionally incorporate, and those materials clearly do not include a silsesquioxane resin. Thus, Sato et al. at col. 27, lines 52-63 reads as follows:

If desired, a thermal polymerization inhibitor for proving the storage stability of the organosilicon compounds, an adhesion improver for improving the adhesion of the organosilicon compound to a work film, an ultraviolet absorbing dye for preventing the light reflected by the work film from reflecting into a resist film, an ultraviolet-absorbing polymer such as polysulfone, polybenzimidazole, a conductive material, a substance exhibiting conductivity by the effect from light or heat, or a crosslinking agent for crosslinking the organosilicon compound may be added to these organosilicon compounds.

Still further, no disclosure exists in the cited documents that a silsesquioxane material as reported in Clodgo et al. would be expected to provide enhanced adhesion, particularly in a system of Sato et al. which reports a composition already containing a certain Si material.

The cited documents also clearly do not suggest Applicants' claims 62-79, which call for an antireflective composition that comprises a silsesquioxane resin that comprises one or more aromatic groups. The cited resin of Clodgo et al. does not contain aromatic groups.

In view thereof, reconsideration and withdrawal of the rejection are requested.

It is believed the application is in condition for immediate allowance, which action is earnestly solicited.

Respectfully submitted,



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